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10/594,126	09/25/2006	Akira Funaki	KINOS-0002	7075

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EXAMINER	
KRYLOVA, IRINA	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/594,126	FUNAKI ET AL.	
	Examiner	Art Unit	
	Irina Krylova	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/25/06; 07/22/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendments to Specification are acknowledged.

2. The addition of new claims 21-30 is acknowledged.

3. The rejection of claim 12 under 35 U.S.C 112 is withdrawn in light of the Applicant's amendment filed on 04/22/09.

4. The rejections of claims 11-20 under 35 USC 103 and rejection of claims 19-20 under 35 U.S.C 102/103 are maintained.

5. The new grounds of rejection of newly added claims 21-30 is set forth below.

Therefore, the following rejection is properly made final.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. **Claim 22** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 22 claims the resin composition containing 5-30mass% of metallocene-type ethylene-alpha olefin copolymer. The instant specification does not

describe this limitation. The instant specification recites the content of metallocene-type ethylene-alpha olefin copolymer being in the range 30-0.02%mass, preferably 3-30%mass, particularly preferably 5-25% mass (see [0034]). There is no citation of the range 5-30%mass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamaguchi et al** (JP 2003-170485) (rejection is based on machine English translation) in view of **Fujimura et al** (JP 2002-144505).

8. The discussion with respect to **Yamaguchi et al** (JP 2003-170485) in view of **Fujimura et al** (JP 2002-144505) set forth in the previous Office Action, is incorporated here by reference.

9. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanaka et al** (US 6,403,719), as evidenced in **Miller et al (**US 2003/0191215).

10. The discussion with respect to **Tanaka et al** (US 6,403,719) and **Miller et al** (US 2003/0191215) set forth in the previous Office Action, is incorporated here by reference.

11. Claims 24-26, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamaguchi et al** (JP 2003-170485) (rejection is based on machine English translation) in view of **Fujimura et al** (JP 2002-144505).

12. The discussion with respect to **Yamaguchi et al** (JP 2003-170485) in view of **Fujimura et al** (JP 2002-144505) set forth in the previous Office Action, is incorporated here by reference.

13. As to newly added claim 24, since **Yamaguchi et al** in view of **Fujimura et al** comprises an identical process as claimed in the instant invention, therefore, the transparent polypropylene sheet obtained by the process of **Yamaguchi et al** in view of **Fujimura et al** would obviously have an impact resistance falling within the same ranges as impact resistance claimed in the instant invention.

14. As to newly added claim 28, since **Yamaguchi et al** specifies heat treating the sheet at a temperature of 70-175°C [0045], and it is known in the art that the melting temperature of isotactic polypropylene appears to be closer to 160-180°C, therefore the temperature range of 70-175°C of **Yamaguchi et al** is overlapping with the temperature

range of "100°C to the melting point of the polypropylene resin", claimed in the instant invention.

15. Claims 21-23, 27, 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamaguchi et al** (JP 2003-170485) (rejection is based on machine English translation) in view of **Fujimura et al** (JP 2002-144505), as applied to claim 11, in further view of **Seelert et al** (US 2002/0019488), as evidenced by **Job et al** (US 2002/0037979).

16. The discussion with respect to **Yamaguchi et al** (JP 2003-170485) in view of **Fujimura et al** (JP 2002-144505) set forth in the previous Office Action, is incorporated here by reference.

17. Yamaguchi et al in view of **Fujimura et al** but fail to teach the resin composition comprising specific ranges of: 1) 5-25%mass of metallocene-type ethylene-alpha olefin, or 2) 5-30 mass% of metallocene-type ethylene-alpha olefin; or 3) 3-30%mass of metallocene-type ethylene-alpha olefin; or metallocene-type ethylene-alpha olefin having MWD of 1.5-4.0.

18. Sellert et al discloses toughened propylene polymers comprising (as to newly added claims 21-23):

1) 50-95pbw of propylene homopolymer having a MFR of 0.1-100 g/10 min (230°C, 2.16 kg), and isotacticity of at least 98% , preferably 98.0-99.5% ([0023]);

2) 5-50 pbw of metallocene-produced ethylene copolymer containing 4-40%wt of polymerized C4-C20 alkylene and having a density of 0.865-0.92 g/cc (Abstract) and MFR of 3.9 g/10 min (see [0205] , examples).

The propylene polymer composition comprises an advantageous property profile in terms of good impact strength, processability and has high rigidity ([0012]).

19. As to newly added claim 27, though **Sellert et al** does not specify MWD of the metallocene-type ethylene-alpha olefin, nevertheless, since the ethylene-alpha olefin of **Sellert et al** is produced using metallocene catalyst, and it is well known in the art that metallocene catalysts produce polymers with narrow MWD of approximately 2-3.5 (see [0031] in **Job et al**), therefore, the metallocene produced ethylene-alpha olefin copolymer of **Sellert et al** would intrinsically have a MWD within the same ranges as MWD claimed in the instant invention.

20. Since

1) **Yamaguchi et al** in view of **Fujimura et al** disclose a method for producing a **transparent** polypropylene sheet from a composition comprising (see Table 1):

-60-97% mass of polypropylene having an isotactic pentad fraction 0.85-0.99 and melt index 2-10g/10 min;

- 4% mass of olefin copolymers ([0076], [0077]. [0016]),

wherein the method comprises:

a) melt extruding the composition;

b) cooling for quenching the sheet ([0040], [0041]);

c) heat treating the sheet at a temperature 70C-175C ([0045]);

wherein the olefin copolymers comprise metallocene produced ethylene-alpha olefin;

but fail to teach the resin composition comprising specific ranges of: 1) 5-25%mass of metallocene-type ethylene-alpha olefin, or 2) 5-30 mass% of metallocene-type ethylene-alpha olefin; or 3) 3-30%mass of metallocene-type ethylene-alpha olefin; or metallocene-type ethylene-alpha olefin having MWD of 1.5-4.0;

2) **Sellert et al** discloses toughened propylene polymers comprising:

- 50-95pbw of propylene homopolymer having a MFR of 0.1-100 g/10 min (230°C, 2.16 kg), and isotacticity of at least 98% , preferably 98.0-99.5% ([0023]);
- 5-50 pbw of metallocene-produced ethylene copolymer containing 4-40%wt of polymerized C4-C20 alkylene and having a density of 0.865-0.92 g/cc (Abstract) and MFR of 3.9 g/10 min (see [0205] , examples), wherein the propylene polymer composition comprises an advantageous property profile in terms of good impact strength, processability and has high rigidity (see [0012]);

therefore,

it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use the polypropylene composition of **Sellert et al,** which comprises an advantageous property profile in terms of good impact strength, processability and high rigidity ([0012]), in the process of **Yamaguchi et al** to produce a

transparent polypropylene sheet of **Yamaguchi et al** having desired level of **transparency** and **impact strength** of the final product.

21. Since the transparent polypropylene sheet of **Yamaguchi et al** in view of **Fujimura et al** and **Seelert et al** comprises the identical composition and is produced by an identical process as both claimed in the instant invention, therefore, an impact strength of the transparent sheet of **Yamaguchi et al** in view of **Fujimura et al** and **Seelert et al** would obviously have an impact resistance falling within the same ranges as the transparent polypropylene sheet claimed in the instant invention.

22. In addition, since such properties as transparency and impact strength of the polypropylene sheet depend on the relative proportion of the olefin copolymers present in the polypropylene composition, therefore, such limitation as relative proportion of the ethylene-alpha olefin copolymer in the polypropylene composition becomes a result effective variable, therefore, it would have been obvious to one skilled in the art at the time of the invention was made, to make variations in the content of ethylene-alpha olefin copolymer in the polypropylene composition to obtain the desired level of transparency and impact strength in the final polypropylene sheet. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05 II).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

23. Claims 19-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Seelert et al** (US 2002/0019488).

24. The discussion with respect to **Seelert et al** (US 2002/0019488) set forth in the previous Office Action, is incorporated here by reference.

Response to Arguments

25. Applicant's arguments filed on 04/22/2009 have been fully considered but they are not persuasive.

26. Regarding the rejection of claims 11-18 under 35 U.S.C. 103 over **Yamaguchi et al** in view of **Fujimura et al,** Applicant argues that :

a) since **Yamaguchi et al** teaches a transparent sheet having rigidity, whereas **Fujimura et al** teaches a "soft sheet", it would not be obvious to combine the "soft sheet of **Fujimura et al** into rigid sheet of **Yamaguchi et al;**

b) Fujimura et al teaches a laminate comprising a polypropylene and ethylene-alpha olefin copolymer, rather than composition comprising these components.

Examiner disagrees.

27. The purpose of the process of **Yamaguchi et al,** as well as goal of the process claimed in the instant invention, is to produce a polypropylene sheet having both **transparency** and **impact resistance. Yamaguchi et al** discloses a transparent and rigid composition comprising a major part of isotactic polypropylene and minor amount of olefin copolymers. **Yamaguchi et al** fail to specify the olefin copolymers being metallocene-type ethylene-alpha olefin copolymer. On the other hand, **Fujimura et al** discloses a polypropylene sheet having surface hardness comprising a metallocene-type ethylene alpha-olefin, wherein the sheet is transparent (see Abstract in **Fujimura et al**). Therefore, it would have been obvious to a one of ordinary skill in the art to include the transparent metallocene-type ethylene-alpha olefin copolymer of **Fujimura et al** into the propylene composition of **Yamaguchi et al** to keep the transparency of the propylene sheet of **Yamaguchi et al.** Though **Fujimura et al** teaches the laminate comprising polypropylene layer and metallocene alpha olefin layer rather than composition, nevertheless, the secondary reference of **Fujimura et al** was applied to show that the sheet comprising an isotactic polypropylene and metallocene alpha-olefin is transparent. In addition, the **Fujimura et al** is a secondary reference and the secondary reference does not need to teach all limitations. "It is not necessary to be

able to bodily incorporate the secondary reference into the primary reference in order to make the combination." *In re Nievelt*, 179 USPQ 224 (CCPA 1973).

28. Furthermore, the impact strength and rigidity in the polypropylene composition is provided by isotactic polypropylene. Addition of low density ethylene-alpha olefin will decrease the rigidity. Therefore, by combining **Yamaguchi et al** and **Fujimura et al** references and making variations in the content of the low density ethylene-alpha olefin copolymer, one of ordinary skill in the art would obviously come to a final product having desired rigidity while keeping the transparency.

29. Applicant also compares the impact resistance of the propylene sheet of **Yamaguchi et al** with the impact resistance of the propylene sheet claimed in the instant invention, showing that the impact resistance of the propylene sheet claimed in the instant invention is higher than that disclosed by **Yamaguchi et al**.
Examiner disagrees. Composition of **Yamaguchi et al** as a single reference and the composition claimed in the instant invention are different, therefore, impact resistances of the propylene sheet of **Yamaguchi et al** and that claimed in the instant invention cannot be compared. However, since the composition of **Yamaguchi et al** in view of **Fujimura et al** is identical to the composition claimed in the instant invention, therefore, the impact resistance of the composition of **Yamaguchi et al** in view of **Fujimura et al** will obviously fall within the same ranges of the impact strength of the composition claimed in the instant invention.

30. Regarding the rejection of claims 19-20 under 35 U.S.C. 103 and under 35 U.S.C. 102/103, Applicant argues that neither **Tanaka et al** nor **Seelert et al** mention impact resistance and **Seelert et al** does not mention transparency.

Examiner disagrees.

Though neither **Tanaka et al** nor **Seelert et al** mention some of the properties of the polypropylene sheet claimed in the instant invention, such as impact resistance, however, since the compositions of **Tanaka et al** and **Seelert et al** are identical to the composition claimed in the instant invention, therefore, such properties as impact resistance and transparency will intrinsically be present in the compositions of **Tanaka et al** nor **Seelert et al.**

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina Krylova whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Irina Krylova/
Examiner, Art Unit 1796

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